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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,668	05/03/2006	Chantal Cordier	28944/50037	4382

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EXAMINER	
NEWPORT, JONATHAN M	
ART UNIT	PAPER NUMBER
4176	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,668	CORDIER ET AL.	
	Examiner	Art Unit	
	JONATHAN M. NEWPORT	4176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/07/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the applicant's communication filed on 05/03/2006 and preliminary amendment concurrently filed therewith. In virtue of this amendment, claims 1-16 are currently presented in the instant application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections/Minor Informalities

2. Claims 1-16 are objected to because of the following informalities:

Claim 1, line 28, "the axis thereof" should be changed to --optical axis of the focusing lens--;

Claim 6, line 3, "second" should be deleted; and

Claims 1-16, --.-- should be inserted at the end of each claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 11-14 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 1 and 11-14, the word "inclined" cited in lines 18-19 of claim 1, line 4 of claim 11, and line 2 of claim 14 is a relative term thus rendering the claims indefinite. Clarification is required.

With regard to claim 16, the recitation "wherein the light source … the bottom of the plate" in lines 2-3 is unclear as to what "ground surface" refers to, thus rendering the claim indefinite. Clarification is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Spycher et al. (US Patent No. 7,315,632).

With regard to claim 1, Spycher et al. discloses an optical imaging device (which is equivalent to an imaging optical system, see Col. 4, lines 43-45) suitable for forming optical

images of fingerprints of a finger, the device comprising an optical plate (which is equivalent to a transparent body, see Fig. 4 [1] and Col. 6, lines 43-45) having first and second opposite main faces (which are equivalent to a boundary and support surface and the opposite face of the transparent body, see Fig. 4 [2] and Col. 6, lines 43-53, at least a portion of said first main face situated in the vicinity of a first end of the plate constituting a finger-press surface for a finger at least one light source (which is equivalent to a light source, see Fig. 7, [51] and Col. 8 line 20) situated facing a face of said plate at said first end thereof, in order to illuminate said finger through the plate and imaging means including a focusing lens (see Fig. 4 [32] and lines 28-33) that possesses an inlet surface and a outlet surface determining a magnification factor (which is inherent to a lens), and that is situated downstream from the optical plate wherein said first and second main faces, said face in front of which the light source is situated, and the illumination direction of said light source are arranged mutually in such a manner that the light beam emitted by the source and then reaching the finger pressed against said portion of the first main face in order to illuminate said finger, propagates thereafter inside the plate with multiple reflections (which is equivalent to light propagating in a transparent body at angles sufficient for total internal reflection, see Col. 7, lines 4-46) alternately on the first and on the second main faces thereof in order to teach the second end of the plate opposite from said first end wherein said plate has an end face at its second end that is inclined (which is equivalent to any angle with respect to the face, see Encarta Dictionary for incline - to lie at an angle), at least in part, so that the light beam leaves the plate via said inclined end face without being subjected to significant refraction or reflection the focusing lens is disposed facing said inclined face of the second end of the plate with its optical axis extending substantially in the midplane of the plate between said

main faces and extending substantially parallel to said inclined face and a first mirror (which is equivalent to a mirror, see Fig. 4 [30], Col. 8, 43-45) is placed facing the inlet surface of said focusing lens and is oriented in such a manner as to receive a portion of the light beam coming from said end face of the second end of the plate and reflect it along the axis thereof.

With regard to claim 2, Spycher et al. discloses an optical imaging device according to claim 1, further including a second mirror (which is equivalent to a deflecting mirror, see Fig. 6, [45] and Col. 8 lines 62-67) disposed facing the outlet surface of said focusing lens and oriented in such a manner that the light beam coming from the focusing lens is reflected transversely relative to the plate (see Col. 9 lines 1-5).

With regard to claim 3, Spycher et al. discloses an optical imaging device wherein said second mirror is oriented in such a manner that the light beam is reflected in a direction going away from the finger-press surface which is equivalent to light that has been focused and directed downward by the deflecting mirror (see Col. 8, lines 65-67 and Col. 9, lines 1-5).

With regard to claim 4, Spycher et al. discloses an optical imaging device wherein the first and second main faces of the plate are mutually parallel (see substantially parallel faces of Fig. 5 [2] and face opposite [2]).

With regard to claim 5, Spycher et al. discloses an optical imaging device according to claim 1, wherein the first mirror belongs to a first projecting part which is equivalent to a side part, see Fig. 6 [43] and Col. 8 lines 63-67) fitted on the end face of the second end of the plate, in such a manner as to extend in line with said plate.

With regard to claim 6, Spycher et al. discloses an optical imaging device wherein the second mirror belongs to a second projecting part (which is equivalent to a holding block with a

side part, see Fig. 6 [43] and Col. 8 lines 63-67) fitted on the end face of the second end of the plate in such a manner as to extend in line with said plate.

With regard to claim 7, Spycher et al. discloses an optical imaging device according to claim 1, wherein it further includes a diaphragm situated upstream from and close to the focusing lens (see Fig. 6, [44] and Col. 4, lines 63-67 and Col. 9, 1-5).

With regard to claim 8, Spycher et al. discloses an optical imaging device, wherein the focusing lens is secured to the end face of said second end of the plate via support means (which is equivalent to a side part, see Fig. 6 [43] and Col. 8 lines 63-67).

With regard to claim 9, Spycher et al. discloses an optical imaging device wherein the support means of the focusing lens are arranged to allow the focusing lens to move along its optical axis (which is equivalent to a focusing lens fitted in a substantially form-fitting fashion, see Col. 8, lines 29-33).

With regard to claim 10, Spycher et al. discloses an optical imaging device wherein the support means of the lens (which is equivalent to a side part, see Fig. 6 [43] Col. 8 lines 63-67) are constituted in one piece with said second projecting part incorporating the second mirror (see Fig. 5 and Fig. 6).

With regard to claim 11, Spycher et al. discloses an optical imaging device wherein at its first end the plate includes an end face that is inclined at an acute angle relative to said first main face (see Col. 8 lines 43-45), and in that the light source is situated facing said inclined end face (see Fig. 7 [51]).

With regard to claim 12, Spycher et al. discloses an optical imaging device according to claim 1, wherein at said finger-press portion of the first main face of the plate, at least one side

face of the plate is inclined at an angle that is acute relative to said first main face (which is equivalent to see Col. 8 lines 43-45), and in that the light source is situated facing said inclined side face (see Fig. 7 [51]).

With regard to claim 13, Spycher et al. discloses an optical imaging device wherein both opposite side faces of the plate are inclined, and in that two light sources are situated facing respective ones of said two inclined side faces (light emitting diodes, Fig. 7, [51] face inclined end faces Fig. 5, [31] and [25]).

With regard to claim 14, Spycher et al. discloses an optical imaging device according to claim 11, wherein the at least one inclined side face of the plate situated towards the first end thereof is curved in the thickness of the plate (which is equivalent to a cylindrical shape, see Fig. 5, [30] and Col. 8, lines 59-62), with its concave face facing outwards.

With regard to claim 15, Spycher et al. discloses an optical imaging device wherein the light source is not a point source (which is equivalent to a plurality of light emitting diodes, see Fig. 7 [51] and Col. 9, lines 3-6), presenting a significant surface area and being placed facing the bottom main face of the plate, substantially facing said finger-press portion provided on the top main face, and directed towards it.

With regard to claim 16, Spycher et al. discloses an optical imaging device wherein the light source is a matrix of light-emitting diodes (which is equivalent to a plurality of light emitting diodes, see Fig. 7 [51] and Col. 9, lines 3-6), with a ground surface (which is equivalent to a diffuser between the light source and the transparent body, see Col. 4, lines 48-52) interposed between the light source and the bottom face of the plate.

Citation of Relevant Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Neukermans et al. (US Patent No. 6,122,394) discloses an optical fingerprint scanner with external optics and optic supports and curved plate surfaces.

Prior art Kato et al. (US Patent No. 5,077,803) discloses an optical fingerprint detection system with multiple inclined surfaces and illumination methods and finger support plate diagrams detailing means of frustrated total internal reflection (FTIR).

Prior art Fujiwara (US Patent No. 6,185,319) discloses a fingerprint input apparatus having a light source facing a concave surface of a finger support plate to make divergent the fingerprint illuminating light.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN M. NEWPORT whose telephone number is (571)270-7553. The examiner can normally be reached on Monday through Thursday, 7:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thuy V. Tran can be reached on (571)272-1828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M. N./
Examiner, Art Unit 4176

/Thuy Vinh Tran/
Supervisory Patent Examiner, Art Unit 4176
02/13/09